

# Columbia River Gillnetter

Columbia River Fishermen's Protective Union

Spring 1997 / Vol. 28, No. 1



## Seining Grounds Astoria, Oregon

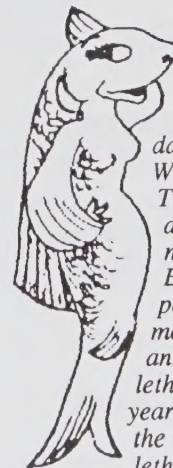
This picture was taken during the days before 1930 when seining was still legal. Horses and men pulled in the seine to a sandbar where it was shallow enough for men and animals. The seine was towed by two launches from upriver along the sandbar until it was groped by the men and horses which formed a pocket by towing both ends into the beach. Nearby was a floating horse barn where the horses stayed until the tide was low enough to bring them out on the sand. Also a bunkhouse and cook shack were built on pilings where the crew stayed during the summer. Seining usually started about 2 hours to low water when the sandbar started to show. Picture furnished by: Godfrey LaPlante

## Seining Grounds Foremen

The following comes partly from Cecil Moberg's recollections and partly from Ids on the back of old seining grounds photographs. Seining crews themselves came from diverse backgrounds, as Cecil Moberg describes on page 4 [of the Quarterdeck, Vol. 20, No. 1]. The size of the crews, number of grounds, etc., make a comprehensive listing prohibitive. The sketch that follows is offered in the hopes that it will job community memories, and that a more complete picture will emerge.

Many of these names were so intimately associated with horse seining that in the local vernacular the shoals where they worked were literally theirs. Thus a seining ground could be known by several names at the same time. For instance, the "Inside" or Astoria Sands, on Desdemona Sands facing Astoria, officially was named Van Dusen Sands, after the original leaseholder. But many people called them simply Ken Parker Sands, after the crew boss who ran the seining operation for many years. (continues on page 4)

## Sally the Salmon Says...



Seals & Sea Lions are depleting me more every day off the Oregon and Washington coast and rivers. Two studies, one 5 years ago, and one 3 years ago and nothing has happened. Environmentalists and politicians have stalled measures to control these animals. We need controlled lethal action, not another 8 years of discussions. Reinstating the authority for the intentional lethal taking of California Sea Lions & Pacific Harbor Seals by commercial fishermen to protect gear and catch, and to save me from extinction.





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## Editorial

Everyone knows the cause.

We all know what the main cause is, but the power planning council doesn't want to act because of the tremendous Political pressure put upon them. Dams are the problem. Period.

The Columbia River alliance, which represents irrigators, bargers, and other river users is fighting tooth and nail to keep anything from changing.

The US Supreme Court decision in March 97 allows industry groups to challenge the Endangered Species Act in court. The Columbia River Alliance has filed notice in federal court that it intends to sue the government to get a say in how dams are operated to save the salmon from extinction. The Alliance's 60 day notice names NMFS, US Corps of Engineers, US Bureau of Reclamation, and Bonneville Power Administration as targets.

The special interests of the Aluminum Companies, the power companies, and agriculture industries have driven the Columbia Hydro System for decades. Their interest has been the prevailing interest over the interest of saving the salmon for far too long.

Salmon restoration efforts have focused on hydroelectric dams which have turned the Columbia and Snake into a series of lakes. These lakes, like a hot tub, heat up in the summer months to temperatures that the fish cannot survive.

In my opinion, Bruce Lovelin, executive director, is not interested in saving the salmon, but rather he is interested in stalling until there are just no more salmon.

Let's cut the red tape and work on dam removal. That is the only solution, and it better be done fast-while there is still time left to act.

*Don Riswick, editor.*

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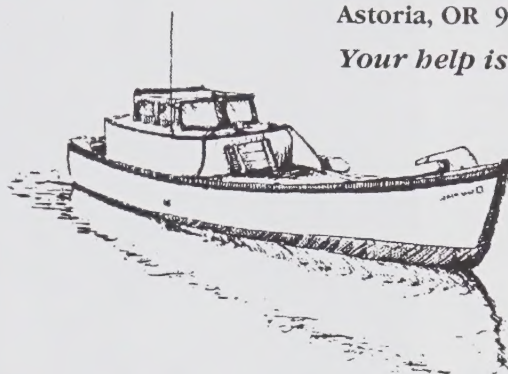
The *Columbia River Gillnetter* is the only remaining publication on the west coast devoted exclusively to gillnetting. We have been making a difference for more than 27 years, but our continued existence is threatened by increasing production and mailing costs. Now more than ever, we need a voice to represent our side of the issue, and the *Gillnetter* is our only contact with fishermen, lawmakers and the general public.

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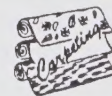
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(continues from page 1)

Henry Pice was CRPA seining grounds foreman from 1914-1950. Photographic evidence places him at Kaboth Sands in 1915. Cecil Moberg later recalled him as foreman at Peacock Spit, possibly during the 1920s. From 1937 on, Henry Pice was boss at Jim Crow Sands.

George Kruchman was another CRPA Seining grounds foreman of several decades standing. Photographic evidence places him on the Desdemona Sands in 1913. Cecil Moberg recalled him being the boss at Meehan Sands, and later at Kaboth Sands. When Cecil worked at Kaboth Sands during the 1930s, Roscoe Miles had taken over as foreman there.

Ernest E. Woodfield, CRPA foreman at Sand Island, is one of the best remembered of the seining ground bosses. His son, Ernest C. Woodfield, also worked on the seining grounds. The younger Woodfield worked for his father for a time, later hiring on with Barbey Packing Company.

Chesley Smith was Barbey Packing Company's Sand Island foreman for many years. The younger Ernie Woodfield worked for him there, and later at Pillar Rock Sands as well. Ernest C. Woodfield was the final Barbey foreman at Pillar Rock Sands from 1946-50.

Ed Elliott and his brother Joe were well known and well liked seining ground foremen. Their family, the Elliots of Elliott Point, Washington, descendants of Chinook Tye Concomly, once held ancestral fishing rights over much of the Columbia estuary. Ed Elliott was foreman at Elliott Sands, near Frankfort. Joe Elliott was foreman at Green Island, and later at Miller Sands.

Ken Parker, as stated before, ran the Inside or Astoria Sands. In later years, he was foreman on both sides of the Desdemona Sands.

Cecil remembered several individuals about whom we have no further information. Brick Miller at one time was foreman at Welch Sands. Sam Wallace from Skamokawa was foreman at Taylor Sands. A Carl Johnson of Portland was CRPA boss at Ostervold's on Puget Island. A Mr. Crandall was boss at H&B Grounds. Cecil also identified a Mr. Petersen as foreman of one of the Sand Island grounds, but as yet we have not been able to determine who among the many Petersens in the Sand Island seining photographs he might have been.

(continues on page 20)



### Too Big for the Seal

*The fall fishing season of 1987, Oct. 15. That year, the seals were on the Columbia River in the hundreds. As soon as a fish would hit the net, it was gone-snatched by a seal before you could blink an eye. "I must of picked up half the net and then I felt something big in the net. I thought it was a seal, so I stoped the power roller, looked over the side of the boat, and there it was, a huge 60lb salmon—the only fish in the net—it was a beauty!"*

—Doc Haglund, Astoria



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## Dear Don Riswick

Thanks for sending me The Gillnetter. I have enjoyed your stories and old-time pictures of Astoria.

Am enclosing a check to help with costs.

*Lester West, Medford, OR*

Columbia River Gillnetters:

We were very interested in the article published a few months ago about a Mr. Jorgensen who had a terrible time with Sea Lions one night while out fishing. We were able to read the article, but were not able to keep it. My husband, Ernest, states that he knew both the man and the boat when he was working his way through college fishing with some of these fellows. If there is any way we can get a copy of that article we would like to have it.

My Father gillnetted on the Columbia for over 50 years. His name is John Wahl. His son, my brother is one of your staunch supporters.

If you can see fit to get the article for us and/or to include the two subscriptions to your printing task we would appreciate it.

Keep up the good work. Thank you.

*Sincerely, Helen Wahl Alne*

Dear sirs,

I was wondering why some one doesn't write a book on the fishing or gillnetting on the Columbia River. So many stories have been told. You magazine has covered a lot of stories and very interesting stories.

In the 1930's when time was kind of tough as a kid I used to go down to the

cold storage and bring home fish back for a very tasty meal.

The time when Captain Elving ferry was pile driving in because he ran over so many nets. He got angry and put it in reverse and tore his way out but I think he got the message.

My Dad used to tell me that some of the fishermen used to let their nets go over the bar on low water and catch it again on the way back, full of fish but kind of torn up.

I wonder if any one knows what a tramble net was, big mesh on the outside of the net and small mesh in the middle. That caught the little ones as well as the big ones. Maybe they still use that set up.

I still remember what we called Sand Island Stew, Corn Reef, Spuds and Macaronis, when we anchored up after a days flood we used to have that and it was good.

The time when some guys took his pants down and showed it to Capt Elving for running over his nets. These are some of the things I remember on the "Brian".

Fish traps and seining on the sand bars and as the tide came up the horses would be put up in a barn on pilling. I remember as a kid going fishing for Tom cods down on the docks and going crawfish hunting around Halloween. I think back on the time when fish were very scares, one or tow fish a week.

We came into George M. Barker when Elmer Bloomquist, the fish receiver that morning, he sent down the hook as if we had one or two fish but that night we caught 9 of the biggest fish I have ever seen. One was 68#, so we told Elmer to send down the box. What a thrill that was to me. Don't mind me but once in a while I do some remembering.

Good old 5 horse power standard

or union going against the tide.

We used to catch half a fish locker with flounders and course lots of jelly fish. I sold the flounders to the mink farms for one penny a pound. That was my spending money.

Just thought I would unload some of my cherished memories. Hope this wasn't boring. Your friend John Wahl. Thanks again for sending me the "Gillnetter" you should charge \$10.00 a copy. Have a good day.

*John Wahl*

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# SALMON COUNTS

## Winter Season

SFA supported a four week season beginning January 27. It was believed maximum sturgeon value would be achieved by a controlled, longer harvest period. The agencies approved a three week season, agreeing to consider the fourth week after in season analysis. Ultimately a week four, 30 hour period was approved. Chinook catch was to be held under 400 for the season, while sturgeon take was estimated at 3,000-4,000. Here are the actual catch numbers:

Week	Chinook	Sturgeon
Jan. 27-31	3	770
Feb. 3-7	14	567
Feb. 10-14	17	765
Feb. 17-18	53	631
Totals	87	2,733

Based on an average sturgeon weight of 26 pounds, at an ex-vessel price of \$1.50, and using the modest 2.5 multiplier Dr. Hans Radtke tells us to use, the contribution to personal income is nearly \$100,000 for each 1,000 sturgeon commercially harvested.

## Sturgeon Season

Jan 27: Mon. noon to Fri. 6pm  
Feb 3: Mon. noon to 6pm Tues.  
Feb 10: Mon. noon to 6pm Tues.  
8 3/4 to 9 3/4 in mesh  
200 lb. lead line

Sturgeon: 2733 caught  
Salmon: 87 caught

## 1997 Youngs Bay Spring Gillnet Landings

	Salmon av.lb	Sturgeon av.lb
April 28-29	292 14.9	15 25.5
Week 18 tot:	292	15
Cum to date	292	15
May 5-6	314 13.1	22 25.2
May 7	150 13.1	15
	25.2	
Week 19 tot:	464	37
Cum to date	756	52
May 12-13	405 13.2	31 25.7
May 14	119 13.2	12 25.7
May 15	80 13.2	9 25.7
Week 20 tot:	604	52
Cum to date	1,360	104
May 19-23	269	139
May 26-30	64	30
June 2-6	82	32
Cum to date	1775	305

There are approximately 10,500 Sturgeon left on the commercial fishermen's quota of 13,500 for the 1997 year, all areas.

## El Niño Warning

NASA scientists issued a prediction that widespread climate shifts may occur during the next months because of the resurgence of El Niño ocean warming in the Pacific. The phenomenon reoccurs every two-to-seven years, producing weather aberrations such as torrential rains in coastal Peru and drought from Australia to the Philippines. The current warming has started earlier in the year and is expected to peak during September or October. The warming currents already have begun creeping up the US west coast, altering fish migration patterns. Sports fishermen off San Diego report catching some species of tropical tuna for the first time in 20 years.

FROM THE  
SECRETARY

## Salmon Going to Court

Why is it that our salmon runs on the Columbia River have to end up going to court, to get the protection they need to survive? For a number of years now, harvest for both commercial and sport has been cut back to near zero, yet in turn, the other user groups on the river seem to think that they can carry on their business as usual. Whenever it is asked for more water flow, like in past years, groups like Direct Service Industries, power companies, up-river navigation people stand up screaming that it hasn't been proven that greater flows bring back stronger fish runs. That's not true. All you have to do is look back in the records to see that large flows, year after year, return larger runs. The only reason we have the large flows today is because of court action. In most cases the judge has ruled in favor of the fish, as any fair person would do.

The power companies keep trying to tell the public how much it costs to spill water, that in turn could be used to give people cheaper power—but the people won't buy the idea, and they never will.

I hope we haven't waited too long to correct our past mistakes, and it won't hurt to keep trying.

In all fairness we can't just put the blame on upper river activities. Just last week I read that the National Marine Fisheries Service finally admitted that the large number of mammals in the ocean may have something to do with declining fish runs and that some type of control should take place.

So all you Salmon that are still left, keep waving your tails, for some help is on the way. — Jack Marincovich

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*Right:  
Net Pens to  
raise fish in  
Deep River,  
Washington.  
Abby Ihander  
used his boat  
for the 17 mile  
tow. See story  
page 14.*



*Below  
Abby Ihander  
Dan Stephens  
Joe Thompson*



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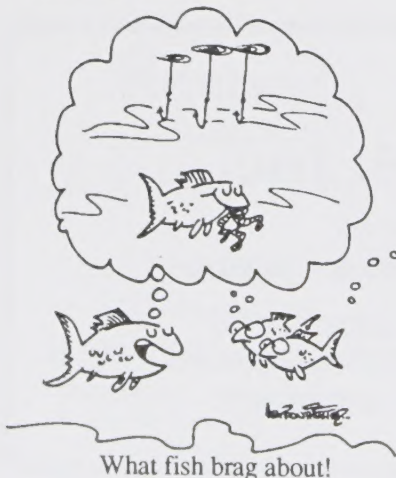
The Smelt season was very good for those fortune few that still gillnet; it seems smelt no longer favor the Cowlitz and the only practical way to harvest smelt is with a net. Record high prices remained through season because cut-throat price war dippers use to gain market share is not present with gillnetters.

Fisheries Dept. abruptly shut-down season, despite fishermen asking to continue on limited basis of 1 day a week fishing, which could have been a test fish to determine strength of run, spawning areas etc. Again the fisheries passed up an opportunity to gain valuable data at no cost.

Someone wrote in the Daily News that perhaps smelt no longer spawn in Cowlitz due to the fact the silt dam on Toutle settles out coarse sand that smelt need. A dam was built to limit amount of dredging need on ship channel. Up-river ports want to deepen ship channel to Portland at taxpayers expense; will this be the final straw for smelt? The bottom of Columbia is where we believe smelt are spawning, however fisheries does not know where. Are we going to let smelt go the way of Snake River Salmon; the taxpayer get stuck paying for channel project so foreign owned ships can go to Portland. Barges can move cargo at cheaper rates than ships; no taxpayer funded dredging needed.

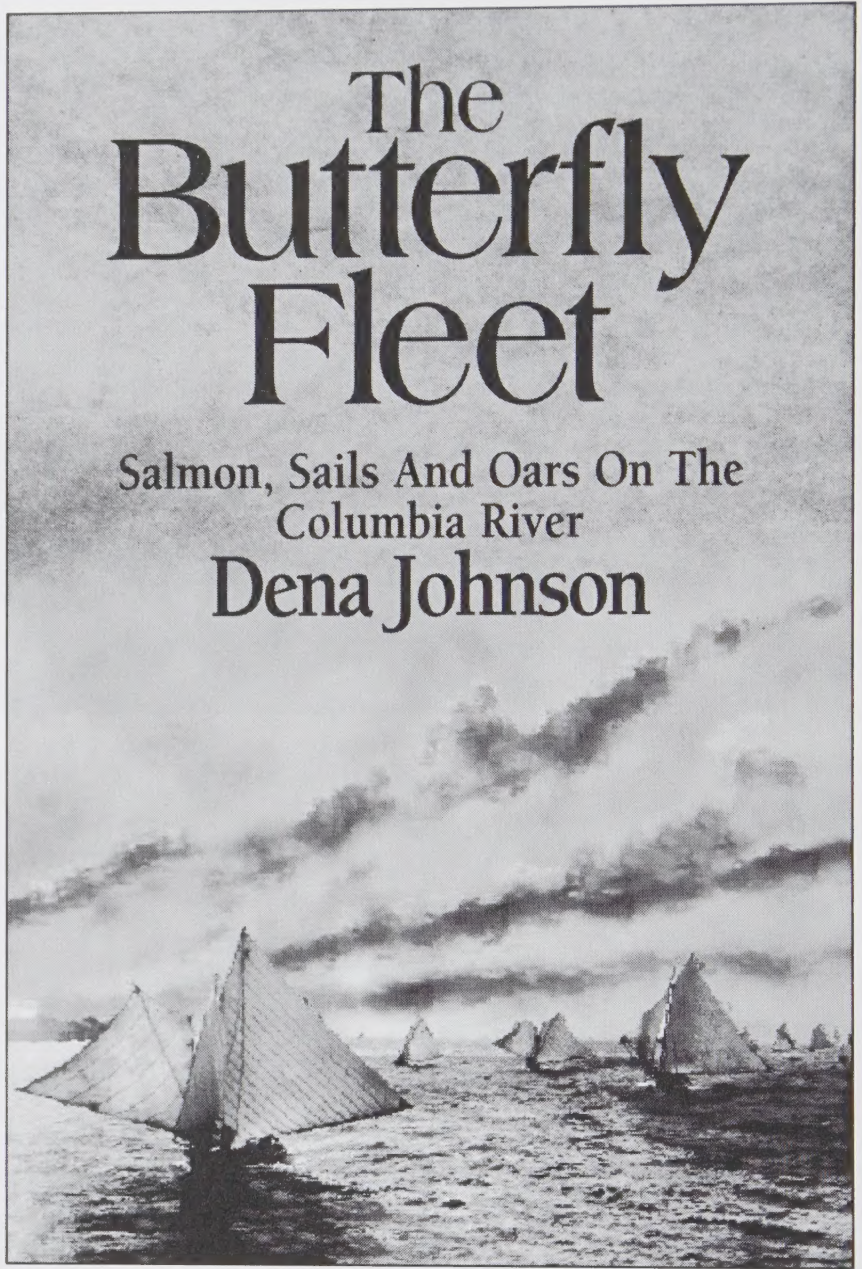
note: Research foresters of Weyerhaeuser report trees grow 13% higher growth in areas where salmon are allowed to spawn! (transfer of ocean nutrients).

— Mark Laukkanen  
Cathlamet, Washington



# The Butterfly Fleet

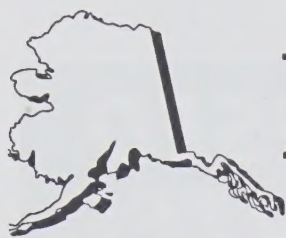
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# NEWS from the North

## Rare whales seen in Alaska

FAIRBANKS, Alaska -- It's been more than 100 years since anyone's seen a right whale calf in Alaska waters. But Pam Goddard was among a group of federal fisheries scientists in the right place at the right time recently to see a right whale calf and three adults near Alaska's Bristol Bay.

"When we first saw them, they appeared to be swimming along the surface, possibly feeding," says Goddard. "They were all in very close contact, particularly a larger whale and a smaller whale, which we think was a calf, were very close together, rubbing against each other. Oftentimes they had their fins in the air. Sometimes they would dive together."

Northern right whales are among the world's rarest. Goddard's July observation was the first time since 1967 that anyone had seen more than two right whales at one time in the North Pacific. But more exciting is that at least one calf was among the four adult whales. Rugb says no one has seen that in more than a century. This important discovery is giving scientists reason to hope for the species' survival.

"The fear was that they weren't getting together, that the animals were on the way to extinction," says Rugb. "There just weren't enough around to produce the next generation. At least we've got one new one coming on that could be around for another 50-60 years perhaps."

Commercial whalers of a century ago called these whales the "right whale" because their blubber was rich with oil, they were easy to hunt, and when killed, they

floated on the surface. Tens of thousands of right whales once lived in the North Pacific Ocean, from Japan to Alaska's Bering Sea. But by 1900, the northern right whale was all but gone. In the years since, there have been only a few sightings.

## Global Warming Proves Blessing and Curse for Guillemots

BARROW, Alaska -- The black guillemot is a seabird common in places like Maine, but in Alaska's high Arctic, black guillemots are newcomers. Yet, despite the long odds, black guillemots have carved a niche for themselves at the top of the world. Scientist George Divoky says guillemots owe their success to a warming Arctic climate.

"Prior to my study, snow melt near Barrow, Alaska, was taking place so late that there wasn't a big enough window for guillemots to breed there successfully," says Divoky. "Only in the past 30 years have conditions been something that guillemots could use for breeding."

Divoky says global climate change has warmed the Arctic about 5 degrees on average, a trend that has caused black guillemots to lay eggs and hatch chicks earlier. A warmer climate also gives Alaska's guillemot chicks more time to learn to fly and forage on their own. As a result, their population has soared. But climate warming is proving both a blessing and curse.

"One of the impacts of global warming is that spring break-up and snow melt occur earlier. This puts more moisture into the air so that in September snowfall is much heavier now than it ever has been

in Barrow," says Divoky. "Snowfall has actually trapped chicks in the colony."

The toll on guillemots has been severe. Divoky says overwinter survival has dropped from a high of about 90 percent to just over 75 percent in recent years.

Another downside may be the loss of Arctic sea ice. Scientists have noticed less sea ice in the North Atlantic Ocean, and they wonder not if, but when sea ice will recede in the high Arctic. If sea ice recedes too far from nesting sites on land, young guillemots may be unable to find food.

## Last of the AT-1 Orcas

PRINCE WILLIAM SOUND, Alaska -- Even as some pods of killer whales in Prince William Sound prosper, scientists fear another may become extinct. Scientists say a group of orcas called AT-1 has lost half its number since 1984, when 22 killer whales were counted in the group.

"We're trying to figure out just what all the possible problems might be," says Craig Matkin, a marine biologist with the non-profit North Gulf Oceanic Society. "We don't see any reproduction in the group and we see animals disappearing, but we're not sure what the problem is."

Lance Barrett-Lennard is a wildlife ecologist at the University of British Columbia helping to unravel the mystery. He says his research has turned up evidence that the killer whales of AT-1 may be a genetically unique population.

"We may be looking at a Last of the Mohicans kind of scenario," says Barrett-Lennard. "It may be a relict population that's quite distinct from other killer whales on the coast. Or, it could be a small pocket of a larger population that exists somewhere out there that we haven't found yet."

Lennard's finding may help explain the lack of newborn killer whales. Complicating matters is the fact that AT-1 females are getting too old to reproduce. Lennard says he's concerned about what that means for the pod's future.

"Unless something happens soon, unless we start to have calves in the next few years, the AT-1s are likely doomed."

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# Fishing for Sound Solution

*A Puget Sound company tries to make fish farming environmentally friendly as aquaculture catches on with a worldwide audience*  
By Jon Christensen, New York Times News Service, March 6

SEATTLE — The salmon season has ended in Puget Sound. But Mariculture Systems Inc. is getting ready to harvest 3,988 5-pound Atlantic salmon from a 60-foot-wide, 28-foot-deep metal and fiberglass tub bobbing in the wake of ferry traffic in the waters around Seattle.

The enclosed tank allows the company to increase oxygen levels in the water, regulate feeding and eliminate waste products. All that leads to quicker weight gain by the salmon, which average a full pound bigger than those raised by Global Aqua USA Inc., a competing company, in nearby pens made of netting.

Mariculture's tanks also protect the salmon from poaching by long-snouted seals and keep them from wriggling free during storms. Just as important, the operation is clean: effluents and drugs used to prevent the spread of disease through the tank's close quarters cannot drift into the ocean as they do through net pens.

Bill Evans, a vice president of Mariculture, compared the company's Fin Farm in Puget Sound to the intensive chicken factories run by companies such as Tyson and Perdue. "This," he said, "is a factory for fish."

With the demand for seafood far outpacing the production capacity of oceans and streams, aquaculture — or fish farming — is one of the world's fastest growing food industries. Globally, sales have reached \$33.5 billion, according to the Food and Agriculture Organization of the United Nations. Fully 20 percent of the seafood eaten by people in 1994, the latest figures available, came from farms.

In the United States, aquaculture production has grown as well, from 167,864 tons in 1984 (valued at \$464 million in 1996 dollars), to 332,817 tons in 1994 (valued at \$795 million), according to the National Marine Fisheries Service of the Commerce Department.

The domestic industry includes shrimp ponds along the Gulf Coast, salmon farms off Maine and Washington, catfish ponds in the Southeast, trout farms in Idaho and the shellfish beds of Connecticut, Louisiana and Puget Sound.

The expansion of the industry, however, has come at a substantial cost to the environment, giving rise to experiments such as Mariculture's bobbing, 535,000-gallon tubs. Citing pollution and the risk of farm-raised Atlantic salmon, which are better suited to breeding in fish pens, escaping to damage the genetic pool of Pacific species, environmentalists have called for a moratorium on salmon farms in Puget Sound.

Shrimp farms around the world have faced similar condemnation because of the destruction of mangrove swamps to build coastal ponds in Thailand and Ecuador.

"Five years ago we didn't talk about the

whole issue of sustainability," said Robert Stickney, former president of the organization. "That's all we talk about now."

The question at the center of the discussions when the World Aquaculture Society met in Seattle last month was how to deal with increased environmental costs. The environmental concerns come at a time of drastic declines in the prices of some seafood, such as salmon, because of increasing farm-bred supplies.

The answer, according to many experts and some environmentalists who are trying to work with the industry, is cutting production costs through increased efficiency and finding a profitable market for eco-friendly products.

Much of the seafood grown in fish farms worldwide is cheap food. Millions of tons of carp, for instance, are raised in inland ponds in China, accounting for nearly 60 percent of the world's aquaculture production.

But aquaculture caters, increasingly, to fancier tastes. Farmed salmon is a \$4 billion industry, providing 35 percent of the salmon consumed worldwide. Production of shrimp and prawns grown in farm ponds, a \$6.8 billion industry, represented more than a quarter of world consumption in 1994, according to the Food and Agriculture Organization. The

United States is the largest importer of shrimp, bringing in \$2.7 billion worth a year.

The industry has faced a barrage of criticism. Environmental groups convened a "shrimp tribunal" at the United Nations last year at which shrimp farmers from around the world were put on mock trial for environmental "crimes."

In the Puget Sound region, six American environmental groups appealed the water quality permits issued to 12 salmon farms. On the Canadian side, the British Columbia provincial government declared a moratorium on permits for new salmon farms until studies are done on the effects of pollution and escaped salmon from 147 existing pens.

the conflict stems from the growing demand for farm-grown seafood. At the recent World Aquaculture Society meeting, environmentalists held a protest at the Pike Place Market in Seattle. But as the protesters denounced farmed salmon and shrimp, people lined up to buy fish from John Peterson at Pike Place Fish Co.

"The world wants salmon," Peterson said. "The demand is worldwide. The supply isn't. Very few people could afford to eat salmon if it wasn't farm-raised. Since Christmas, we've had seven troll-caught salmon here, and we've sold 3,000 pounds a week of farmed salmon."

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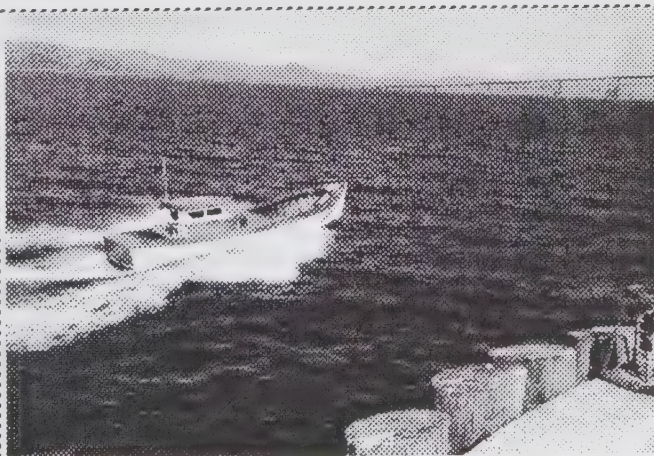
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## *A two-year old salmon restoration effort that puts displaced fishermen to work is starting up again this month, Columbia River Gillnetters Can Restore Their Salmon Industry - And Help Generate Electricity, and Support River Barge Transport.*

by Dan Schneider, November 23, 1996

Does a New Opportunity Exist For Gillnetters AND Hydropower Operators to Restore Natural Salmon Runs?

Is it possible that Columbia River Gillnetters now have an opportunity to restore the large salmon populations and profitable fishing industry decimated by hydropower? Is it possible to change the way we generate electricity on the great rivers of the Northwest to allow safe downstream passage of juvenile salmon? The answer now is a highly likely yes. But we must take a scientific view of what it is about hydropower turbines that destroy salmon - and then take appropriate, positive, remedial action.

Salmon, like people, do thrive in the presence of non-destructive technology. But, if the technology that we place in our living space is destructive, we die; and so it is for salmon too. Thus, to find and use non-destructive hydropower technology, planners and engineers, and fishermen, must use scientific knowledge - the sciences of physics, biology, ecology and physiology - to choose and design hydroelectric generating technology and systems that are non-destructive to salmon while we harvest the electricity we need.

The history of the destructive effects of hydropower has been dramatic; and at each step along that grievous historic path we have learned a bit more about what needs to be done to both generate electricity and live harmoniously with salmon. The earliest hydropower projects simply built dams that totally blocked upstream passage of salmon. The destruction was immediate and obvious as the interception of salmon was absolute! Their denial of access to spawning grounds was profoundly visible. So we tried fish ladders and hatcheries and the destruction became less visible. The killing became harder to see as the smolt were destroyed by the turbines as they grew

and migrated downstream. Thus, we now use complex by-passes systems, and even barge smolt downstream; and shut down of the turbines during smolt runs. But even with these measures, the destruction of smolt moving downstream is still too severe to allow the enormous numbers to pass into the ocean needed for an ample harvest of next generation of adults. The generation of electricity is just too precious to allow long shut down of the turbines, and by-pass and barging are very cost intensive and not effective.

The number of smolt entering the ocean, by laws of natural attrition, has to be very large since they serve as feed stock to predacious ocean ecosystems and are greatly reduced in numbers long before they become adults preyed upon by sea lions in their trek back into their rivers of origin. Just ask yourselves - how many barge loads of smolt per minute must pass into the ocean during spawning runs to serve as feed stock for hungry ocean fish in order for one out of thousands to return as an adult? Remember, as the number of smolt decrease while the ocean feeding pressure remains the same, the result is even larger odds against smolt returning as adult salmon!

What is the Next Step along the Learning Path?

There is hope for salmon restoration. Knowledge progression now brings into focus the final obstacle to generating hydroelectric power while assuring safe migration of abundant smolt to the sea. The next step is to avoid and correct the features of turbines that kill smolt as they pass downstream through the powerhouses in hydropower dams. At first blush, this may seem like a tough order; sort of like making an airplane propeller work in such a way that a person can walk through it while it is turning at full power!

But, there is a way for smolt to safely pass through the powerhouse operating at full power without the smolt being chopped up by turbine blades. To engineer safe passage, we need to start with an understanding of just what things about a turbine are so destructive to smolt. There are six things that a turbine does that make passage for smolt very dangerous. The first is obvious. They are clobbered by the high speed blades. The second killing feature of turbines is the very low pressure formed at

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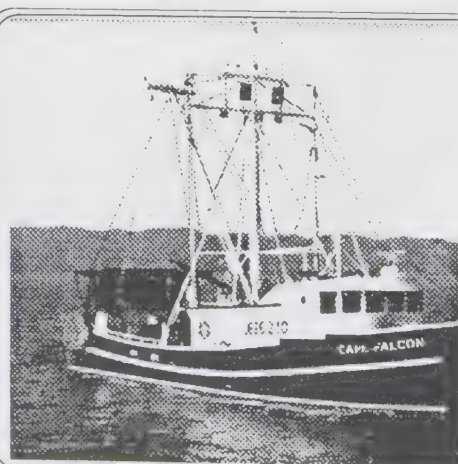
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the high speed rotor tips - low pressure cavitation. The smolt literally explode in a zone of cavitation. The third and fourth causes for kill are associated with the low pressure field near the cavitation zone. The pressure drop causes out-gassing of dissolved nitrogen and oxygen. Nitrogen bubbles form within the tissues of the exposed fish to cause debilitating "bends", and the out-gassing of oxygen deprives the fish of oxygen dissolved in the water to absorb through their gills. The fifth and sixth killing features are associated with water motion - water velocity shear forces can be very damaging to the smolt, and high speed turbine spin causes the smolt to be dizzy as they spin through the spiral case and turbine rotor making any survivors of the previous hazards temporarily disoriented and easy prey to predator fish at the tailrace.

Thus, the next step is to learn about hydropower technology that, by design, avoids the six killing features of turbines (rotors) - even if this means replacing conventional turbines with more appropriate power generating technology!

**So What Can Engineering Design Do to Get Smolt Safely Through Powerhouses While the Power is ON?**

With the six killing features of turbines in mind, we can use our knowledge of physics and physiology to engineer a way that works to generate electricity and let the smolt downstream without damage. This knowledge leads to the logical conclusion that linear traveling foils (like fins on fish or wings on birds or airplanes) instead of turbine rotors could avoid the six causes of fish kill by turbines, yet produce the large power we expect from hydropower sources. Figure 1) shows how linear traveling foils work and compares their operation to turbine operation. All portions of linear traveling foils are at velocity low enough to be easily avoided, and not mutilate smolt even if contact does occur. Shape and spacing allow easy adjustment of pressure loading to avoid cavitation or out-gassing of nitrogen and oxygen. And the water never is put into high shear or spin so the fish are not traumatized or disoriented by water motion.

**What Then, Should be the Next Step in the Engineering Path?**

A number of scientists and engineers share the logic that linear foils will work to let smolt go safely down to the ocean in the numbers needed to restore returning populations of adult salmon to historic harvest levels. Development and testing of linear foil hydropower designs have led to satisfactory efficiency results and promising endurance results. The cost of power promises to be less per kwh than for power generated by gas turbines, the current market standard for pricing of electricity. Using networks of dams that emulate beaver dams, other environmental conditions necessary for healthy spawning and feeding of large numbers of smolt can also be assured while generating the same total power from any given river reach and flow rate as would be produced by conventional high head dams.

Thus, the next engineering step is to advance linear foil designs to operate reliably for many years and test-run them in selected stream settings where the predicted safe passage performance can be carefully measured and documented. Several universities are currently analyzing the technology, and within the next few years the capacity for linear foil hydropower technology to safely pass juvenile salmon will be fully documented. Subsequent, future steps to deploy safe hydropower generating measures that will restore salmon obviously depend on this next engineering development step being taken as carefully and as quickly as possible.

**What Does Salmon Friendly Hydropower Technology Look Like and Does it Work?**

The concept for the linear foil hydropower technology is the basis of the Schneider HydroEngine and the HydroBeaver as shown in Figure 2). In river size engines, the spacing between hydrofoils and the guide vanes would be several feet with the chord length (length from leading edge to trailing edge) also being several feet. Smolt, usually being about 1 foot in length, give or take a few inches, should easily pass through without contact. The hydrofoil velocity would be less than 10 feet per second, but smolt can dart at between 20 and 25 ft per second. What is really important about the foil velocity is that all points travel at the same velocity so the throat area can be very large and the foil velocity can be very low to pass large flows of water for large power at low cost without damage to smolt. The NatEl System as illustrated in Figures 3), and is designed to emulate networks of beaver dams in which healthy, strong populations of fish characteristically thrive. Note the conservation of the river habitat with a rich abundance of native species both in terms of numbers and diversity. Such conditions of habitat are also essential to restoring large numbers of smolt.

The linear foil technology works very well with efficiency levels comparable to turbines. So from the stand point of hydropower it has real potential. How well it performs in passing juvenile salmon still remains to be tested, but all the reasons for safe passage of salmon are now well in place. But the experiments to scale up current models to sizes suited for testing salmon survival will require about two years to accomplish. These tests will be accomplished as soon as possible and funds to conduct these tests are currently in negotiation.

**OK, But What about the \$ Billions of Cargo Barge Transport on the Columbia and Snake Rivers?**

Right now there is serious talk about removing large dams from the mainstem rivers. This would totally destroy cargo barge transport. But remember, we are not talking about eliminating dams. We are talking about changing the way we generate electricity at dams to use linear foil technology rather than smolt killing turbines. There still would be dams; with different power generating technology. Cargo barge transport would be able to use locks at ecologically sustainable hydropower dams just like at any other dam with locks. And remember, there are

probably more dams in the world with locks for transport but without powerhouses than dams that generate electricity and have locks for transport.

The \$ billions of cargo barge transport really does not care what type of technology is in the powerhouses; but the type of technology means restoration of salmon and resurrection of the commercial salmon fishing industry worth many millions of dollars. Ecologically sustainable hydropower technology means our Northwest keeps on generating electricity, keeps on barging - AND, we get back gainful fishing employment.

**Still not Quite Satisfied! - What about Recreation on the Columbia and Snake Rivers?**

What better recreation is there than sharing the restoration of salmon with sports fishermen? Boating, sailing and other river sports will still thrive in lots of places to play, since these uses of the river also do not really care what type of technology is used in the powerhouses.

**All Right, But What Can Columbia River Gillnetters Do Now?**

Columbia River Gillnetters and other fishermen can do several important things.

1) Encourage the group of scientists and engineers to complete the research and development of the salmon friendly linear foil hydropower technology. They have formed a not-for-profit organization called the Ecologically Sustainable Hydropower Institute to further research and development. Your letters of encouragement will spur their effort forward. Let them know your views and recommendations. Contact Dan Schneider at 331 West FM 407, Justin, TX 76247; e-mail 71142.626@compuserve.com; and telephone or FAX at 817 648 0304.

2) Write to your Senators and Congressmen and other responsible leaders requesting they strongly encourage the research and development of ecologically sustainable, salmon friendly hydropower technology. Let them also know your views and recommendations.

3) Mobilize alliances for sustainable hydropower in the Northwest with allies concerned about restoring salmon AND generating hydropower. Let them know your views and recommendations through active participation. -- Organize conferences and work/study groups.

4) Request your state and federal agencies, and environmental groups concerned with fish and river management, learn about fish friendly alternatives to turbines for generation of electricity in ways that could safely pass smolt through power ON powerhouses.

5) Become fully informed about salmon friendly hydropower generating technology and then encourage standards for hydropower generation that can provide safe passage of smolt through fully operational powerhouses.

**So, Your Committed Action is Needed - Now. -- Right Now! Write Now!!!**

Make science and government act to correct hydropower turbines that destroy salmon; take positive, remedial action - now.



# Deep River Enhancement Project

by Eldon E. Korpela

**T**he incentive to encourage salmonid enhancement in the State of Washington was provided by the 1989-90 legislative session. Funds to finance the venture were to be provided by a surcharge of \$100 on each commercial license and one dollar on each sport license.

I became involved in the Washington program through my appointment as Enhancement Director for Salmon For All in 1990. I had been able to gain some experience in this area during almost five years as a member of the Oregon's Salmon and Trout Enhancement Committees. Here we established policy for about 6,000 volunteers and actually spent time meeting with volunteers and inspecting projects throughout the state at seven different meeting locations each year. Oregon's program has been in effect since 1981.

Washington was just beginning and hired only two biologists to cover the entire state. Cathlamet's Wahkiakum High School did have an excellent project but it was established earlier from a different fund.

For management purposes, the State of Washington was divided into twelve different enhancement areas. Ours, number eleven, encompassed the area along the Columbia River from Bonneville to the mouth and included all the tributaries.

Our initial years were spent in numerous meetings with potential volunteers, biologists, and local residents familiar with the area and inspecting possible enhancement sites.

Deep River stood out as ideal for a net pen program after trips Jim Hill and I took under the tutelage of Dean Badger and Bill Kato. It appeared to have the elements required for security, depth, easy access, lacking in a native run and isolation from the main stem Columbia. Other parameters of course remained to be tested.

In order to qualify for available funds a committee was formed to elect officers and write the organization's by-laws. Much credit is due to Tim Abena, Rich Gushman, Chris Doumit and Jim Stolarzyk, the first officers who during numerous meetings wrote the by-laws. Lower Columbia Fish Enhancement Group was the name chosen for the new organization.

To keep members informed, the group published a newsletter and also established a \$10 membership fee to defray initial expenditures. With the organization intact, state funds could then be applied for.

The Youngs Bay net pen project showed that salmon can be imprinted and released in areas which may not support natural spawning. This has proven to reduce mortality and increase returns. Walt Kato's dock best met our initial requirements for the net pens and satisfied the state which approved a \$15,000 grant for the project in September of 1992.

During the winter of 1993, Ab Ihander and I, along with other gillnetters and biologists constructed a double net pen. The project would normally require 5 or 6 people about 6 hours to complete with

the materials costing around \$10,000. The east winds blowing on the construction site were challenging, even to hardened fish people. Using Ab's boat during a March day, we towed the pen from Tongue Point across the Columbia to the Deep River site with Dan Stephens leading us through the channels.

We requested coho for the initial project, but during April of 1993, 55,000 unmarked fall chinook were transferred to the net pens from the Elokomin Hatchery. These were released the following month and contributed to the 1996 ocean and river harvest.

Later, during 1993, two officers from the LCFEG visited Washington fishery officials in Olympia to inquire about future net pen projects. They were told that it was illegal to transfer state fish to our project. This was puzzling since we successfully carried out the fall chinook transfer and the State of Oregon had been making fish and eggs available to enhancement projects for many years.

For the next 20 months the net pens stood idle while many of the potential volunteers lost interest and project nets were transferred to other areas. The LCFEG does have projects in a number of other areas which include cleaning streams, spawning checks and enumeration of fry.

Then, with a couple weeks notice, we were informed that the State of Washington would transfer in December 1994, 50,000 unmarked Toutle stock coho to Deep River. We were in deep trouble until Jim Hill volunteered to loan us the re-

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quired nets and personnel to reset the project. Feed never was a problem since it was always delivered to the site by Grays River Hatchery personnel. The 50,000 coho weighed about 2,200 lbs and were transferred through 80 feet of 6-inch pipe from trucks to pens. Walt Kato has done most of the feeding of fish reared in Deep River.

During March, Ab towed a four-pen raft and attached it to Tiny's dock which is located downriver a short mile below Walt's landing. 150,000 marked coho were transferred into these pens.

The release from these two sites contributed to a harvest of 2,690 coho in Deep River and unknown numbers to the Buoy 10 and ocean fisheries.

During 1995 Bonneville Power funding supplemented Washington enhancement funds because the addition of rafts and fish food far exceeded available monies.

During 1995 four additional pilings were driven at Walt's dock so more rafts

could be accommodated there since the rafts at Tiny's interfered with tugboat traffic and were removed.

During February another four pen rafts destined for Deep River were constructed at Tongue Point and towed in April with Larry Telon doing the navigating. The total rafts at Walt's dock reached twelve and 200,000 pre-smolt marked coho were trucked in to be fed, imprinted, and released for 1997 harvest.

The commercial fishery in Deep River was limited to night fishing with fifty fathoms from 7 PM to 7 AM two days per week. This would give potential sport fishermen adequate opportunity before and during the season to harvest the Deep River stock without conflict.

Since the release of these fish the Deep River net pens have remained empty. Washington Fisheries did not have any spring chinook or coho available and did not wish to utilize surplus Oregon fish "due to genetic constraints which could result in excess straying."

There will not be a Deep River fishery during 1998 but we are told that coho will be available for rafting during the spring of 1998 for 1999 harvest and biologists are searching for a source for spring chinook.

There are many individuals that deserve our gratitude for the Deep River venture, however, I would especially like to thank the contributions made by Larry and Yvonne Hawell, Jim Hill's Youngs Bay staff, the Grays River Hatchery crew and hard working Washington fish biologists such as Mark Miller and Mac, and the dedication of Walt Kato.

In conclusion, I hope that the success of this program results in additional terminal type fisheries for sport and commercial on the Columbia River by the State of Washington.

Editor's Note - Washington seems not too interested in raising net pen fish. Oregon is having great success.



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# Saving the salmon may mean killing dams

The people responsible for restoring wild salmon runs in the Columbia River are talking about the hitherto unthinkable: breaching four dams on the lower Snake River to let fish pass.

That would drop the water level 100 feet and return that portion of the river to natural, free flowing condition, as scientists have urged.

And that would mean no more electricity would be produced for the Bonneville Power Administration at those dams - a loss of nearly enough power to serve Seattle.

It would mean the end of Lewiston as a water-based port because barging goods would become impossible. And it would leave agricultural irrigators' pipes high and dry.

Just as astonishing, the U.S. Army Corps of Engineers, which will decide in two years whether to proceed with channeling around the Snake dams, also has asked Congress for funds to study a permanent deep draw down of some 30 or 40 feet of Jon Day Dam on the Columbia River for the same purpose.

A deep draw down would end navigation at John Day too unless it locks were rebuilt to accommodate the barges. And it would pose compelling and timely questions in this high-water year about flood control for the city of Portland. The corps also is studying whether it would mean the end of power generation at that dam as well.

The Northwest Power Planning Council at its meeting in Spokane March 12 went one step further and asked the corps to include in its studies a "modest" fiddling with flows at McNary Dam, which would affect water levels at the Tri-Cities.

If all the changes were carried out and John Day's locks were not modified, Columbia River barge traffic would end at The Dalles rather than Lewiston.

Could it be that these people are getting serious saving salmon?

Well, yeas and no. What has happened as the result of interminable nail biting and reported scientific studies is that the decision makers - the power council, the corps, the BPA, the National Marine Fisheries Service and members of Congress - are being left with fewer places to hide. They're having to face inescapable fact: Harmless tinkering will not save the fish.

Yet the Endangered Species Act requires that we save them.

Meanwhile, a recent U. S. Supreme Court ruling came as manna from heaven for the barge operators, irrigators and electric utilities that oppose dam modifications. The court said those who are economically affected by enforcement of the ESA can sue claiming that too much is being done to save a species. So the Columbia River Alliance last Thursday filed notice of intent to sue to halt the effort to change the dams.

If they succeed, it's a food be they'll get credit for killing the wild salmon runs.

Many key actors in Congress, such as Sen. Slade Gordon, R-Wash., also take a

dim view of efforts to restore genetically important wild fish runs. But even politicians are capable of surprises. Take Idaho's Gov. Phil Batt.

Faced next month with potentially painful consequences for Idaho irrigators of a listing of the Snake River steelhead as threatened, Batt recently dropped a little bombshell.

He signaled that his mind is not closed to kissing goodbye the water behind four lower Snake dams - Little Goose, Lower Monumental, Ice Harbor, and Lower Granite. Those dams, which are partially of earthen construction, impound water over a 140 mile stretch between Lewiston and Pasco.

Batt has been careful never to say outright that he supports breaching the dams; he has said only it should be studied. But in the hypersensitive atmosphere of salmon recovery politics, his proposal telegraphed a message that seemed to say; Let science rule. That scared some people, delighted others and surprised almost everybody.

Batt proposes that studies be conducted on whether it would work to leave the steelhead in the river to migrate rather than barging them around dams as now is of-

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ten done, and to study returning to a 'normative' run of the river, commonly understood as breaching the dams in some fashion. That's exactly what scientists say should be done.

Cynics, who unfortunately surface even in such high-minded enterprises as this one, have postulated that Batt may be willing to flush Lewiston in order to save what water he can for his upriver political base irrigators. And since Idaho is in tough negotiations with the Nez Perce tribe, which has filed a troublesome claim on practically 100 percent of the Snake River's water, Batt's in a tough spot, and there's speculation he may need something to trade.

In total, the four Snake dams produce about 5 percent of the electricity in BPA's system. Only one of them, Ice Harbor, serves irrigators, and only 14 irrigators at that, according to power council sources. Their irrigation pipes could be extended to reach the river. The dams serve little flood control purpose, according to the corps.

The Port of Lewiston is the stickler. It is to continue as a shipping center after the dams are gone, it would have to be by rail or truck, not barges.

Even though Batt has suggested the breaching study he apparently is not keen on living with the consequences if it concludes breaching is best. The Port of Lewiston is "a non-negotiable item" according to his spokesman, Frank Lockwood.

If the four Snake dams are breached, it may be possible for Idaho to hang on to more of its water in the Dworshak Dam on the north fork of the Clearwater River above Lewiston rather than be required to flush in into the Snake-Columbia system to move fish. That dam's primary functions are power generation, flood control and recreation.

Lockwood says Batt is willing to study everything from a more normal river flow to draw down of the John Day Dam, but he wants to know what the price tag is, who will pay and whether society is willing to bear the costs of salmon recovery.

Mike Field, Idaho's representative on the power council, says it's Idaho's position that there's not enough water in the system to save all the fish the feds want to save.

Studies already are on track to determine the fate of the four Snake dams. But without \$4.5 million from this Congress to pursue separate studies of deep John Day draw down and the more moderate draw down of McNary, those two solutions will not materialize. Congress should fund these studies to the region can get a clear understanding of its workable options.

"We don't know enough to say whether we'd get more benefit for salmon from a minimal pool lowering at McNary Dam, which could increase spawning

habitat upriver in the Hanford Reach, than from a deeper draw down at John Day Dam," says power council chairman John Etchart of Montana. (Unlike deep draw down, at minimum pool operation, barges could pass the dams and turbines could get enough water pressure to turn and produce some electricity.)

A group of independent scientists asked by the stake holders to recommend what is needed to save the fish made it clear that natural, free running river habitat is the most important improvement they need. That should end that debate.

But ending the squabbling about what wild salmon need to survive also means the options for saving them are narrowing to hard ones that will require dramatic, fish-friendly fixes.

Solveig Trovik is an editorial writer and a member of the Post-Intelligencer Editorial Board. E-Mail address: SolveigTrovik@Seattle-PI.com

## California Chinook Chill Out

If chinook salmon and fry embryos could sweat, they would drip with perspiration in water exceeding 56 degrees. In water over 57.5 degrees, they begin to die.

An endangered run of salmon on the Sacramento River are under such a threat, blocked by a dam from their historical spawning grounds in the chilly, gravel-bottomed creeks of Northern California's Cascade Mountains. Only 2,000 winter-run chinook have been counted in the last three years.

In an effort to keep the salmon from overheating, the Federal Bureau of Reclamation is bolting a huge \$80 million temperature control system to Shasta Dam. The device which can draw water from Shasta lake's chilly depths as well as the warmer layers above, will end a decade-old conflict between two competing

goals, the production of electricity and the protection of salmon. When it's finished in December, the cooling system will be the largest structure ever devoted to fish preservation.

The intake system is being bolted to the dam by divers. Some must live for month at a time in pressurized chambers because of the depth at which they work.

Central Valley water users will pay for the project through an environmental improvement tax.



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# Washington State Permit Buyback

Here are WDR&W's numbers for the second round of license buybacks:

Charter - 16 @ \$24,900 average

Troll - 52 @ \$45,145 average

Gillnet - 72 @ \$31,740 average

That totals 140 licenses at an average of \$36,000 per license. For comparison, the average for round one of buyback was \$13,000.

In two rounds of license buyback, Washington has purchased 436 licenses of which 155 are Columbia River/coastal gillnet licenses.

At press time it does not appear that additional emergency funds will be available in the foreseeable future for Oregon or Washington buybacks. However, discussions are on-going to find other sources of funding for both buyback and leaseback.

Salmon for All has adopted a plan of action designed to get Oregon on-board for a future license buyback. To date, the Governor's office has not supported buyback, but there is some indication that attitude is softening. It will, however, take considerable effort by the industry to gain support. If you are willing to help out by attending meetings, talking with policy makers about the importance of buyback as a business option for your industry, please give SFA a call at 325-3831. You can immediately get involved. Fishermen and women, whose businesses are directly on the line, must be willing to work on this to protect their financial interests.

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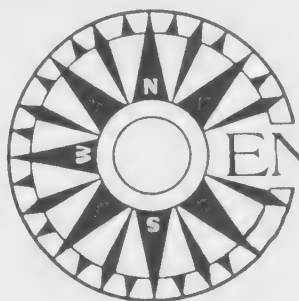
*Oral History Interview November 10, 1988 Tape #42—Kent Martin and Jim Bergeron, Interviewers Condensed from transcript pages 8 - 31*

CM—CRPA was very much involved with seines. CRPA had Peacock Spit, which as you know is that sandbar right off the [north] jetty. It extends out into the ocean. They fished that in the late summer season, July and August. And it was run by a man by the name of Henry Pice. He was the boss there for Bumble Bee, or CRPA as it was known at that time, and they did some terrific fishing there. There were many days in late August when they would get 100 ton of salmon. And it was not uncommon at all to get 50 ton in one haul. They had extremely heavy seines there. I mean the webbing in their seines—the bunt of the seine, which is the pot where you land the fish, was made of double the weight of the heavy ply. I would say they made their bunts of 60 cotton, which is terrifically

heavy. There were three seining grounds on Sand Island. Most of those grounds delivered their fish to Barbey Packing Company. There were three men there. There was Chesley Smith run a ground at that time. Mr. Ernie Woodfield run a ground. And then there was a fellow by the name of Petersen run a ground on Sand Island. There were no jetties on Sand Island then. It was just a sandy island. The river flowed right by it. And it was quite a long island, as you know it reached from up at Chinook clear down to the narrow channel between the lower end of Sand Island and the north jetty, where Ilwaco channel goes in. And in August there, July and August, they got a lot of fish on Sand Island. My goodness, they used to bring scow loads of salmon over to Barbey and to CRPA. Then as you go up the river, Mr. Ed Elliott had a ground over by Frankfort called Elliott Sand. He seined for CRPA. And then the next step up the river, CRPA had Meehan Sand, which was below Altoona, right on the end of what we call the Chute, where the channel makes that left handed jog from Altoona over to Tongue Point. That was another productive seining ground. Meehan Sand was run by Mr. George

Kruchman. And the next ground that CRPA had was Kaboth Sand. That was run by Mr. Kruchman. After he left Meehan, he was at Kaboth. And then in later years it was run by Roscoe Miles. And then they got fish from Ostervold's ground on Puget island. And then there was Puget Island seining ground, too. But Ostervold's was run by Mr. Carl Johnson from Portland. And then on up the river, the next ground that CRPA got their fish from was Mr. Crandall's seining ground. It was called H & B grounds. It was around Mayger. Then earlier in the summer when the blueback were running, Deer Island was quite a semmg ground. And they also seined at Rooster Rock, which is by Multnomah Falls. And that was about as high—there was a little bunch that seined below Celilo. But those were CRPA seining grounds, and they got a lot of fish from them. And you see, in those days you could fish steelhead, too. And the summer steelhead runs were terrific. They got tons.

And then—the whole north shore was lined with traps. All the way along from Point Ellice, where the north end of the bridge is now, from there all the way



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down into Chinook Bay were fish traps. You know, they said at one time, I can remember this from when I was young, that those people in Chinook were the richest in the United States, per capita. And of course, they could sell their fish to the highest bidder.

But the seining grounds were a big operation. CRPA owned some of grounds, the sandbars, but an awful lot of them that were owned individually. For instance, there was a man by the name of Mr. Welch, Peter Welch was his name. And he came down here in the early years and he hired a man with a boat to take him out. He could see what was coming, And he saw these sandbars exposed on low water, like this one out here that you can see all the time, right in front of Astoria. That was called the Astoria Sands. And Mr. Welch owned the outside of that. That was called Welch's Sand at one time. He would have them surveyed and then he'd buy them from the state. And companies like CRPA, Point Adams Packing Company had seining grounds, and Barbey Packing Company had seining grounds. Pillar Rock Canning Company up at Pillar Rock, they had seining grounds. And they'd lease the sands from him for tonnage. When they were in full swing, the seining grounds would have from 20 up to 30 men, that is the upriver grounds. Now Peacock Spit and Sand Is-

land, when they were operating in full force, I think Peacock Spit hired as many as 75 men. They had big crews. Of course, wages in those days, on the seining grounds you got about \$2.00 a day and board and room.

KM—Were there bonuses for—?

CM—Not for the working men. The men that run the grounds received wages, like Mr. Pice, Mr. Miles, Mr. Kruchman, all these gentlemen. And there was Mr. Sam Wallace on Taylor Sands out here. He was from Skamokawa. And Brick Miller run Welch's Sands. Ken Parker run the inside sand, the Astoria Sands. And all these gentlemen that were the bosses, they were on a yearly salary to the company. And then they got so much a ton, bonus, for the fish they caught. And, of course, they worked long hours in the summertime, and in the winter they were getting the seines ready for next year. And an interesting thing, you know, the horses that they used on the seining grounds were furnished by two men. There was a Mr. Golder over in Chinook up in Bear Valley there. I would say that he probably had in the neighborhood of 200 head of horses. And Finley High in Morton furnished horses for Ed Elliott and Joe Elliott, his brother, up at Green Island. And he furnished horses for Ken

Parker Sand. I would say Finley had in the neighborhood of 75 - 100 head of horses. They used heavy horses for seining. They were mostly Percherons and Clydesdales, but they were mixes—chunks.

KM—Do you think they were the same kind of horses that were used in logging?

CM—No the logging horses were much bigger horses. They used great big Percherons. See, they used single horses in the woods because they had to go between the trees. So they used single horses in the woods and they were great big horses. We had some teams on the seining grounds that weighed—I would say we had horses that weighed 1800 2000 pounds. We had some big teams. The average team weighed, I would say, about 2400 pounds, about 1200 up to 1600 pound horses.

KM—Cecil, did you ever work on the seining grounds?

CM—Oh, I worked for many, many years on the seining grounds I worked for Roscoe Miles and Henry Pice both. And I worked on the skiff mostly, skiff captain, because I was a good net mender. Even if I'm blind now, I can still mend net as (continues on page 27)

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# 1930's Regatta Gillnet Boat Races

The initial Regatta on the Columbia River at Astoria, was in 1894. It became one of the leading events in Oregon in over 100 years since that time. The event is still a very prominent event on the Astoria Waterfront each summer.

The commercial gillnet boat races became a highlight of the Regatta in the 1930's and then again after World War II in the late 40's, 50's, and 60's.

There was probably more participation in the races, during the 'hey-day' of commercial fishing on the Columbia River during the 30's even though the individual competitiveness probably was greater during the advent of higher powered v-8 engines after the war.

The Pacific motorboat magazine did an excellent job covering the Regatta as well as the gillnet boat races in those years. We thought it would be interesting to take a look at those races of 60 years ago now and the following information and names was taken from the magazine.

The winner of the free-for-all race in the 21st annual Regatta revived in 1932, was William Haglund from Ivy with Wayne Palo from Astoria in 2nd.

The King of the 30's was Joe Goska from Knappa winning the unlimited race in 6 different years with his boat (he won a total of 10 races in all in those 9 years).

1937 was an interesting year in that Ernie Niemela from Mayger with his New Columbia built boat won the main race. Considering the recent tearing down of the Tolonon Columbia Boat Yard. Many readers and fishermen will remember the activity around the year and the boats that were built there.

Missing and inaccurate information is unintended and corrections and additions would be greatly appreciated by the writer and editor.

Jon Westerholm, Gillnetter Board Member

## 1932

- 5HP Martin Holthe, Astoria  
 15HP 1st Verne Bjornstrom  
 2nd William Macklin  
 Unlimited 1st William Haglund, Ivy  
 2nd Wayne Palo, Astoria

## 1933

- 4HP Arnold Johnson, Astoria  
 5HP Verich Viuhkala, Astoria  
 6HP John Znkich, Astoria  
 12HP Walter Johnson, Altoona  
 15HP 1st William Poikkila, Ast.  
 2nd Marko Gizdavich, Clifton  
 Unlimited 1st William Rosenberg, Van.  
 2nd William Haglund, Ivy  
 3rd Wayne Palo, Ivy  
 4th Gust Wally, Ivy

## 1934

- 4HP 1st William Viuhkala, Ast.  
 2nd Art Bishop, Ast.



August 1958 Regatta Race, Astoria



Joe Goska got his boat from Gust Wallin, his uncle, in 1930 or 1931. He put in a 35 HP Kermath engine. This boat won 7 out of all races till 1937. Ernie Niemela had a new boat built and finally beat Joe in the free-for-all race with a lot more horsepower.

- 5HP 3rd Arnold Johnson, Ast.  
 1st H.M. Ystad, Astoria  
 2nd Martin Holthe, Ast.  
 6HP 3rd L. Sorenson, Ast.  
 1st John Zankich, Ast.  
 2nd Ed Loukila, Ast.  
 3rd Nick Lacich, Ast.  
 15HP 1st Emil Westerlund, Ilwaco  
 2nd William Poikkila, Ast.  
 3rd Wilmer Johnson, Altoona  
 Palmer Engines  
 1st Wilmer Johnson, Altoona  
 2nd Jack Kama, Ast.  
 3rd Oney Empo, Brownsmead  
 Unlimited 1st Joe Goska, Knappa  
 2nd Wayne Palo, Ast.

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1935

5HP 1st Henry Herlin, Ast.  
2nd Jacob Karki  
3rd G. Hermanson

6HP 1st John Zankich, Ast.  
2nd Ed Loukila, Ast.  
3rd Elmer Korpela, Ast.

15HP 1st Ed Westerlund  
2nd William Poikkila, Ast.  
3rd Elmer Kiminki, Ast.

Unlimited (Columbia River Type)  
1st Joe Goska, Knappa  
2nd Antone Untinen  
3rd Wayne Palo, Ast.

Unlimited (Any type)  
1st Joe Goska, Knappa  
2nd Antone Untinen  
3rd Wayne Palo, Ast  
4th Grant Elliot  
5th A. Lahui

2nd Gust Wallin, Ivy  
3rd John Loback, Ast.  
4th Clayton Marston, Mayger  
5th Wayne Palo, Ast.

Unlimited (Any type)  
1st Joe Goska, Knappa.  
2nd Gust Wallin, Ivy  
(continues on page 26)



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1936

5HP 1st Henry Herling, Ast.  
2nd William Viuhkala, Ast.  
3rd Uvno Mackey, Ast.

6HP 1st William Lugnet, Ilwaco  
2nd Art Bishop, Ast.  
3rd Ed Erickson, Brownsmead

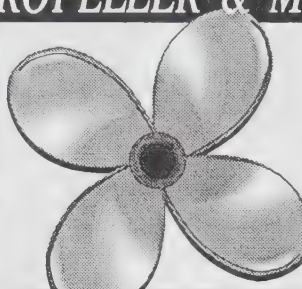
15HP 1st (tie) Wilmer Johnson, Altoona  
& William Poikkila, Ast.

3rd William Lugnet, Ilwaco  
4th Howard Dunsmoor, Brownsmead

Unlimited (Columbia River Type)  
1st Joe Goska, Knappa.

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## The Last Word on Lutefisk - the Norwegian Delicacy

by Gary Legwold

The peak years for cod-fishing off the Lofoten Islands in Norway were in the 1940s, when 20,000 to 25,000 fishermen converged on the islands.

Lutefisk is not easy to love, or even like. What's more, it's not easy to explain to the uninitiated. But here goes. Lutefisk is fish (cod or ling) that has been preserved by drying. This hardened stockfish is prepared for cooking by soaking it for several weeks first in water, then in a lye solution (that's right), and finally in water again. The term "lutefisk" comes from the Norwegian, "lute" meaning to wash in lye solution, and "fisk," meaning fish. The Swedish term is "lutlusk," Danish "ludfisk."

The result of drying, soaking, skinning, and boning is a translucent, gel-like meat you can boil or bake. Lutefisk's subtle taste will not offend you, but the odor probably will.

Like an opera, a lutefisk supper is full of anticipation, a build-up to the climactic scene. Consider, for example, one of the first lutefisk suppers I attended ... at Our Savior's Lutheran Church in Beldenville, Wis. After driving an hour and a half and then finally finding the church that was in the countryside ... I stepped out of the car into the clear night air. Through open kitchen windows, I could hear the behind-the-scenes clatter and tings and high-pitched conversation that go with serving church food and washing dishes. I entered the church and paid \$9 for ticket number 1140 — that many people had already bought tickets, I was told, many of them arriving that afternoon in yellow buses.

I waited in the sanctuary for my turn to eat, thinking about how these people must really love lutefisk to temporarily alter the sanctity of their place of worship with lutefisk's aroma. Of course, medieval cathedrals sheltered sheep and pigs, setting the precedent that prayer could not be diminished — perhaps it could even be enhanced — by earthy odors.

(Come to think of it, I wonder what's the origin of the word "pew?")

After five minutes or so, the ticket seller called number 1140 along with several others. This person appeared to be pleasant and accommodating. I wondered if the job demanded someone naturally gifted at calming the normally friendly folks who, during waits that sometimes last an hour or two, feel they can no longer tolerate the tease of being so close to lutefisk and yet so far. (I imagined a headline: "Seething Scandinavians Storm Sanctuary.") However, with only a short wait tonight, there was no risk of a mob scene. I rose from my pew and lined up with a dozen other lutefisk devotees. As we would our way down the dim stairs to the basement, a merry din came up at us, as did the ever stronger fish odor.

We turned a corner into the basement all abuzz. Women in bright red Norwegian costume dresses called "bunads" were whizzing to and fro, whirling around table ends to serve more Swedish meatballs here, more lefse there. Other women were seating people at the 30 or so tables, covered with simple tablecloths and arranged in a way that made the large room seem intimate. Smiling women swerved around white-washed floor-to-ceiling poles, gracefully swooping to pour coffee, and squeezing through the passages between tables and paneled walls decorated with garlands and posters of scenes of the old country.

A woman in a "bunad" beckoned me and a few others to an open table. No sooner did we unfold our napkins and nod to our neighbors, when presto, another woman presented a platter heaped with steaming, shimmering lutefisk. Ah, let the feast begin! I took my first bite. Mmmmm. Indeed, this was the big aria. Fabulous fish. Firm, flakey morsels melted in my mouth.

Bowls were passed and refills requested. Diners at my table seemed content to quietly savor the meal and not distract

themselves with small talk. What talk there was was all to the point: Sugar please. Certainly. Could I trouble you for some flatbread? "Tusen takk" (a thousand thanks in Norwegian). Care for cole slaw, or a roll? I'll take some melted butter for my lutefisk, please.... Yes, just a little more lutefisk, thanks. It is good this year, the fish. Coffee would be fine, thanks. I better save room for those "sandbakkels" (pastries) and "krumkake" (small cakes) I see over there. I'm sure I won't have room for the rømmegrøt (cream pudding).

I finished and pushed my chair back from the table, amazed at how much I'd eaten of such simple fare. No secret spice mixture, no rich red sauces that dominated the palate, but such taste. I realized, with some surprise, that a plain potato — no butter, no sour cream — actually had flavor. Same with a roll. And the lutefisk? It was prepared to perfection, not overcooked to wallpaper-paste consistency. And it was flavorful; don't let anyone tell you lutefisk is tasteless. The flavor is subtle — fishy, to be sure — and cannot be separated from its slide-down-the-throat texture and rich Scandinavian tradition. But it does have flavor. I doubt that lutefisk alone has enough flavor to attract hundreds of paying customers. However, when served with side dishes of more common foods, lutefisk takes center stage and draws a crowd. A lutefisk supper is a classic case of the whole being greater than the sum of the parts.

I rose from the table and began making my way out. I met Norma Taplin, one of the women wearing a "bunad," and she introduced me to Audrey Halverson, Gehart Iverson, LeMoine Christopherson, and several others. They were taking down wall decorations, cleaning up in the kitchen, and straightening the dining room. For the most part, these were people near or past retirement age. A night like this had to be exhausting, and a few folks I talked with wondered aloud just how long these suppers can keep going. But most people, instead of being depleted by the day, seemed to be buoyed; beat yet upbeat.

I asked Rev. Richard Ulvilden, the Norwegian-American pastor who had recently retire, "What is it about lutefisk suppers that energizes and unites a community?"

He paused, leaned back in his folding chair, and put his hands behind his head. Finally, he looked me in the eye and gave me the answer: "Lutefisk, the cod that passes all understanding."

Amen.

Minneapolis writer Gary Legwold's book, *The Last Word on Lutefisk: True Tales of Cod and Tradition*, was published last October by Conrad Henry Press of Minneapolis. SON members ordering through Heritage Books receive a 10 percent discount off the \$14.95 price. Call toll-free 888-838-BOOK (2665) to order.



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## A Wave Goodbye



### J. Elmer Hurula Fisherman, 86

J. Elmer Hurula, 86, of Clatskanie, died Wednesday, December 25, 1996, in Longview, Wash.

Mr. Hurula was born in Quincy to Finnish immigrants John Arvid and Ida Karasti Hurula, Dec. 22, 1910. He attended Midland School until he was 14, then began commercial fishing with his father. He fished for the next 60 years on the Columbia River and in Alaska. On July 14, 1933, he married Sylvia Manninen in Kelso, Wash. She survives.

Mr. Hurula was one of eight people interviewed for the video, "Preserving the History of Gillnet Fishing on the Columbia River," presented by the Columbia River Maritime Museum in Astoria and Oregon State University. He was a member of the Columbia River Fisherman's Protective Union and the Alaska Independent Fisherman's Marketing Association. He hand crafted canes of wood and gave them to people in need. An avid gardener and sport fisherman, he will be remembered as a devoted husband, father and grandfather who was always willing to help others. He also will be remembered for his wonderful sense of humor.

In addition to his wife, Mr. Hurula is survived by three daughters, Sharon Krause of Clatskanie, Donna Kent of Knappa and Marjorie Kaufman of Spring Valley, Calif; two sons, Larry Hurula of Clatskanie and Gordon Hurula of An-

chorage, Alaska; three sisters, Irene Henderson of Eureka, Calif., Ila Pisilar of Kalama and Saimi Sture of Astoria; 16 grandchildren; and seven great-grandchildren.

A service was held. Interment was at Murray Hill Cemetery in Clatskanie. Haakinson-Groulx Mortuary in Clatskanie was in charge of arrangements.

Memorial contributions may be made to the Clatskanie Volunteer Fire Department, P O Box 807, Clatskanie, OR 97016 or Clatskanie United Methodist Church, P O Box 676, Clatskanie, OR 97016.

### Jack L. Davis 1943 - 1997

Jack Leonard Davis of Rainier died Thursday, Feb. 20, at St. John Medical Center in Longview at the age of 53.

He was born in Waldport on Nov. 23, 1943, the son of Delbert and Luci (Thompson) Davis, and had attended school in Kalama, Wash. He moved to Rainier from Longview 17 years ago. A commercial fisherman in the Columbia River and Puget Sound, he was a member of Salmon for All in Astoria and the Columbia River Fisherman Protective Union. He enjoyed fishing, building boats, and picking blackberries.

Survivors include Carolyn, his wife of 12 years, at home; four sons, Kevin Davis of Longview, Jamison Davis of Ore-

gon City, Matthew Davis of Fargo, N.D., and Mark Brezeale of Longview; two daughters, Veronica Stewart of Vancouver, Wash., and Cynthia Paris of Moses Lake, Wash., his mother, Luci Davis of Rancho Mirage, C.A.; three brothers Duane Davis of Kelso, Jerry Davis of Longview, and Daryl Davis of Aloha; four sisters, Delores Rasmussen of Longview, Judith Davis of Forest Grove, Linda Powell of Rainier, and Lianne Rogers of Rancho Mirage, C.A.; seven grandchildren; and numerous nieces and nephews.

A celebration of life service was to have been held Monday, Feb. 24, at Steele Chapel in Longview. Memorial donations have been suggested to Community House Health/Hospice, P.O. Box 2067, Longview 98632.



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2nd Joe Goska, Knappa  
Unlimited (Any type)  
1st Ernie Nicorela, Mayger  
2nd Joe Goska, Knappa  
3rd John Loback, Ast.  
4th Louis Gardakiety

1938

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2nd Art Prepula  
3rd Elmer Kiminki, Ast.  
4th Jack Karna, Ast.  
Limited ?HP  
1st George Grege  
2nd George Severson, Ast.  
3rd John Risto  
4th Eino Esko  
Limited ? HP  
1st John Strandholm  
2nd Carl Pierson, BlindsloUGH  
3rd Rudy Kantola  
Unlimited (Columbia River Type)  
1st Joe Goska, Knappa  
2nd Ernie Niemela, Mayger  
3rd Ben Jolma, Clat  
4th Alfred LaJesse, Ast.  
Unlimited (Any type)  
1st Joe Goska, Knappa 2nd Axel Annval-  
di, Clat. 3rd Ben Jolma, Clat.  
4th Carl Pierson, BlindsloUGH

1939

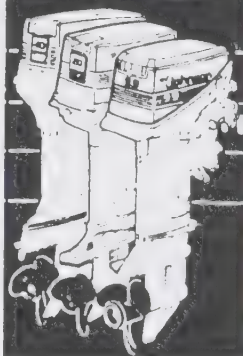
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2nd Larry Yadro, Brownsmead  
3rd George Swensen  
4th Marko Gizdavich, Clifton  
71HP (or less)  
1st William Raihala, Brownsmead  
2nd Grant Elliot  
3rd John Strandholm  
4th Alber Viuhkala, Ast.  
Unlimited (Columbia River Type)  
1st Joe Goska  
2nd Earl Anderson, Ast.  
3rd John Haglund  
4th Ernie Niemela, Mayger  
5th Charles Elliot  
Unlimited (Any type)  
1st Earl Anderson, Ast.  
2nd Axel Annundi, Clat.  
3rd Ernie Niemela, Mayger  
4th John Haglund

1940

- 71HP (or less)  
1st Paul Hummasti, Svensen  
2nd A. Avola  
3rd Ralph Elliot  
Unlimited (Columbia River Type)  
1st Joe Goska, Knappa  
2nd Earl Anderson, Ast.  
3rd Oscar Haglund, John Day  
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## Seining

good as anybody, just by feel. And I was head hooker.

I don't know if you have seen the pictures; seining grounds are a sandbar right out in the tide, along the channel generally, and two boats are involved and normally 1800 to 2400 feet of seine. These two boats go up above the seining grounds, up the channel, and they lay this net out in a half-moon. Then this net is brought down and when next to the sand, he'll turn this net over to a team of horses, the tail team they call it. And then they take that net right into the sands. They always fished seines when the tide was running out or slack water, either high water or low water slack. Now a lot of these grounds couldn't even fish until it was half tide, because these sandbars were so low that you couldn't work with the horses. When the water got up to their bellies they had no pulling power—they'd float. So you had to have more or less a dry beach so they could get their strength into it. And those were heavy nets to pull in. The leadline was made of 3-inch manila and it had a great big 16-ounce lead every foot to two feet, depending on what part of the net it was. And this was hanging right on the bottom. And to pull that in, it took a lot of horsepower, in plain words.

The seine was in the water, and on this seining skiff they had about 250 fathom of 3-1/2-inch manila line. And what we call a becket was spliced in every 10 fathom, which would be about every 60 feet. A becket is simply a loop of rope that is spliced in two places. You splice it in one end, and then you splice it in the other end, and you leave slack in it. And this was for the purpose of hooking the chain in from the team of horses. As soon as the launch brought this skiff in with this line, the head hooker would jump out of the skiff, grab the line and run over to a team. And this team would hook into the becket and go dashing up the sand. There was no weight on it yet, and he'd take up the slack. As soon as the line got tight, then the head hooker would hook another team on. And when you were first starting to pull that net in, you had to have three teams pulling all the time. It was that heavy a pull. It took three good teams of horses to pull that seine in. And then as you came in, you had three or four men that were—up to eight men—working on the seine skiff, and they were coiling this line back on the boat as it came in. And the head hooker, as fast as he hooked one team on, he'd yell, "Ooohhh," and the team on the beach would let go and come around, circle back out and come around and hook on. And just as soon as he hooked on, "Ooohhh," and another team would drop

off, and that's the way you kept going. These teams were just going in a constant circle. When I was working on the head, I always tried to work in water above my waist, just above my waist, because it was so much easier. You didn't have to lift and tug on the net. The head hooker gathers all this web—you stood up and you had your waders on. And the head hooker always wore overalls over his waders, because that seine web was dragging across your body and if you didn't have overalls on you'd wear a hole in your boots. The waders were made of rubber. In early years they were canvas with rubber inside, but in later years they made them out of just rubber, like a pair of rubber boots are. And they came up right under your armpits. You'd follow this web around, and then when you got another team in below you, he'd give you about 18 inches, up against the net, you'd grab that, give it a flip and it'd come around twice and you'd slap that hook on and he was going already. And you had to watch that you didn't get your finger in, because it just cinched right up. And guys have lost fingers hooking on the seining grounds. By the time you got him hooked, you'd "Woah," and another team dropped off and you were ready to hook on.

By doing this, you would soon have this

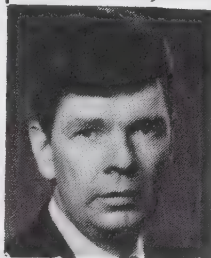
net pulled in so that you had about 400 fathom of net out there in a half-moon, right in the shallow water. And when you got to the bunt, what we call the pot, there was a buoy marking each end of that: one on the upper end, the tail end, one on the head end. When you come to these buoys, then the horses were dropped off and all the men come out there and you'd get about four men on each lead line. If I was hooking head, I had these four men up the beach from me. I stood with my foot on the lead line, holding it down on the bottom. And the tail hooker, he would stand in front of me with his foot on the lead line. He had four men pulling and they interlaced, one upstream, one downstream, and so forth, so there were eight men pulling. And they'd pull together, "Hup, hup, hup," pulling in on this lead line, and as it came in it was sliding underneath your foot. And boy, when you felt the end of that loop come on the lead line, you were ready. "Woah." And they stopped right now, because they would pull you down, you know. So then you reached down and picked up this lead line.

And then you had all this cork line—these great big wooden floats. The floats on seines were about 12 inches long and six inches in diameter and they were close together, very close together. (continues on page 29)

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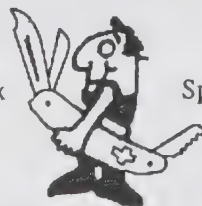
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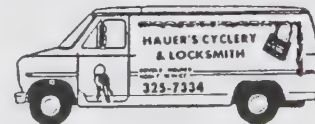
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## Seining

And there in this pot you had all this web and this line: there were all your salmon. And then, men would get all the way around the cork line, and you'd work this web in and there you had fish. I've worked on a net on Jim Crow Sand where we took in 50 ton with one haul. But I have seen many times 4 or 5 ton of salmon. And then you had a fish skiff. In later years we had power in them, but in the old days they were double end, like a trap skiff, and we had pegs all the way around the gunnel. You hooked this cork line over there, and then the fellows in the water would work the fish over. When I worked with Roscoe Miles, Roscoe and I were the gaffers. He was the boss. I would be on one end of the skiff and he would be on the other. He could gaff left handed. I couldn't. I gaffed right handed. So I was on what would be the east end of the boat and he was on the west end. And those fish, the guys would shake them and, most of the time, their heads were all one way. It was just a steady stream of fish coming in. You had a gaff hook, and they were coming into the boat. Until you got down to, say, about 400 - 500 pounds, then the guys would just lift up and dump that. It was interesting. I had gaffed so many fish when we had heavy runs the tendon in my hand here would swell up clear into my arm, that my thumb would get so sore, you know, from holding.

KM—What drew you to seining as opposed to gillnetting?

CM—well it was an interesting life. And I was real good friends with the Miles family and fishing was so poor. At that time the gillnetting was so poor.

KM—And when was that?

CM—That was in the '30s. I remember the last year that I fished there for a little while, we started out in the spring. We got 6 cents a pound for the best fish. Then, as the fish got poorer, in August it

got down to 1/2 cent a pound, and we quit. We couldn't even make our gas.

JB—Do you think the fact that all these fish were taken by traps and seines had some effect on the price?

CM—Oh, I don't know. No. That was the Depression that knocked the price. But an average price, what we considered in those days a good price for fish, was 10 or 12 cents a pound.

JB—The price in earlier years had been higher and then it dropped.

CM—Yes, it did. And it took quite a while for it to come back. It started to come back in the late '30s. Then, of course, during World War II it came back strong. And that seems to be a funny thing, but every time there's a war, there were lots of fish. That's odd. World War I there was a terrific lot of fish. World War II there was more fish than—I don't think there had ever been runs on the Columbia River as there was in the '40s when World War II was on. Terrific lot of fish.

JB—I think that's reflected in the statistics. So in the '30s it was hard for a gillnetter to...

CM—To make a living. That's how come I went over to seining. And I enjoyed seining. I enjoyed it so much. I enjoyed the horses. I enjoyed the companionship of the men. There were very well educated men. There were lots of college guys, going to college, you know. There were family men working out there. It was a good life. It was an outdoor life and you worked hard, you ate terrific. The seining grounds fed—you can't believe. For breakfast you'd have—well, first you'd start off with cereals, dry cereals, cooked cereals, and juice and fresh fruit. And then they'd come with ham and eggs, and always hotcakes, and pitchers of milk for the young fellows that wanted milk, and coffee. And you ate until you were completely full. I've seen young fellows eat a dozen big pancakes along with half a dozen eggs and a couple slabs of ham.

They just ate. They were young and they could get away with it. And pies, every meal, you know. There was pie at least once a day for dessert, fancy pies of all kinds. Then they would send down and we'd get ice cream up sometimes. All we had, though, was ice houses. And steaks, man you had steaks and roast beef. The food was absolutely—some of those women, seining ground cooks were famous for their cooking. There was one, Mrs. Anderson, from Uppertown. We called her "Beefsteak." Her name was Ella Anderson, and she could fry a steak like no one you had ever seen. She was tremendous. And on Kaboth Sands, Agnes Miles, she was a marvelous cook. And Mrs. Walter Anderson was another lady. She cooked on Meehan Sand for years. She was Finnish lady. She could put out the food. She was famous for her cooking. And so it went. A lot of these women, in the winter, would cook in boarding houses. You know, there were in Astoria, at least, 20 or 30 fishermen's boarding houses. They were something else, too. They opened in the summer and they fed the fishermen. Generally it was \$1 a day for board. That included great big buckets—they were about 7-1/2 gallon metal cans with a tight lid on them. And twice a week they would bring that can in and the cooks would fill that up with loves of bread, pies, big chunks of roast beef, canned corn beef, eggs and bacon, were in this can, and the fellow would cook in the boat. In the early days they used these little Svea stoves, those Swede stoves. Have you seen them? They're a little brass stove with three legs on them.

JB—I've got one.

CM—That's a Svea stove. You were supposed to use coal oil in them, but I think two thirds of the guys in later years used gasoline. They were a little dangerous, all right. I've thrown mine overboard a couple of times. You had to pump them up and when you'd release the jets, sometimes they'd catch fire. And the only way to do was to heave them overboard.

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Get rid of them because they were dangerous. There's nothing more dangerous than fire in a boat.

But those horses that we had, we had them for many years, and they were characters in themselves. The fellows that drove teams on those seining grounds, anybody try to get their team the next year, there was almost a battle. They wanted their teams back. I remember one horse I drove. His name was Nugget, and he could count, because we used to feed oats and for measuring we used these gallon cans that vegetable and fruit come in. Nugget could eat two and half of these cans of oats twice a day when they were working hard. And you always gave them a good watering before you fed them. And I know when I came with those two and a half cans of oats, I could only carry one in each hand. I'd dump them into the box. And old Nugget, he'd kick on the manger with his front foot and he wouldn't quit until I went and got him that other half a can.

JB—Could you tell us a little bit about whip seines?

CM—I had a whip seine myself. I fished on Hog's Back Sand above Tongue Point, Benny Miles and I. There were several well known whip seiners on the river.

Point Adams had a whip seine ground up out from Tongue Point. Cotton Nelson run that. He used to be coach at Astoria High School. His son was Tom Nelson. And then there was Axel Bjorklund. And Henry Cole was a whip seiner. And Ed Bryant was a whip seiner. And whip seines, what they did, they just had a long seine and two boats. They would have a shallow piece of ground, preferably a ground that didn't go dry—a sand that just shallowed up till there was about 3 - 4 feet of water on it. They only fished on the ebb tide. And they'd go up in the channel, lay this net out in a half-moon, bring it down, and then one of the boats would come towing across, right over to the other boat, and then the two boats would tie together. And they'd tow together like this, and here was this net out here in a big bite. And as you towed, then you would turn around and tow up the river and just buttonhook it. And this seine would whip down with the tide. You'd drop a great big anchor and this net would come right together, just close up, and down in that far end you would have all your salmon. And you had a little scow that you kept the net in, and on this scow you had a big timber across with a big roller that stood out over the edge of the scow. It was about three feet wide. You got all the net up over this roller—the whole double net. You got it up, going over this roller, and the two men followed the lead line. And the salmon were in there. They couldn't get away.

JB—Followed right back to the end of the net?

CM—Clear down to the bunt of the net again, see. And the fish, as you come working, they'd work down that way.

Those guys, I've seen whip seiners get ten ton a day. Oh yes, they did big fishing. It only took four men to operate it. That's all.

JB—Cecil, back to the camps. You mentioned grub, but you didn't describe the cookhouse

CM—Well, the cookhouses were—there's still a couple of them standing. There's one in Alderbrook yet. But they were all along the river. Each on what we called a station. Like Scandinavian Station in Alderbrook had the Scandinavian bunkhouse. It was a two story building. It had a big kitchen and a dining hall with just big long tables with benches. Upstairs were rooms for the fishermen. And the cooks downstairs cooked three big meals a day. And then they filled the lunchbuckets for the fishermen besides. The Toika boarding house, that was one. That's down on Bond Street right before you go over the hill on the left hand side. I don't know what they call it now. About Second and Bond, there's that big building against the side of the hill there. That was the Toika boarding house. That was famous. They put out wonderful meals. I know my dad and mother used to take us kids there on Sunday after church and you could eat a meal there family style, and it was all you could eat there on Sunday for 75 cents a person. And us kids got it for about, I think, 50 cents.

JB—The seining ground cookhouses—

CM—Some of them were on pilings. A lot of them were on floats. Great big log, floats and scows. They even had a horse barn—Point Adams had two great big

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horse barns. They were on 60-foot logs. A regular barn with a hay mow and the whole works. The horses were down one side and the hay was on the other, and they could keep 14 head of horses on these scows. And generally the barn boss had a room on the barn. He stayed there all the time with the horses. And you know, several of the horses drowned. When you were landing the fish, the horses would stand up on the beach in, say, about a foot to two feet of water. And if a salmon got loose out of the net and got up amongst them, it would drive them plumb crazy. They'd get scared. That salmon swimming against their legs, you know. And I've seen horses take off and run. Like up on Kaboth one time we had a runaway. And up in the middle of the sand there had been a fish trap. So there were old pilings about 2 or 3 feet high. And this one team, it was Mutt and her son—she was a great big mare and she had her son working with her, a great big gelding. And the young horse got scared to death and they run—they were running just as hard as they could go. And the double trees—all you used for harness on the seining ground was the collar and the belly band and the hames. You had no breaching on the back end of the horse at all. Nor no breast band or anything. And these double trees, when they would run away, you know, those double trees would hit them on the rump. They'd sail up in the air and hit them and just scare them that much worse. And we saw that team going up the beach and they run about, it was about 1/2 a mile or more up to these piling. And I remember Roscoe saying, "Oh my God, I think they're going to run into those pilings." And they did go in—one horse went on each side of a pile and the double trees hit that. And all you could see were horses flying in the air, turning somersaults, you know. They were going that fast, and when they hit that piling it threw them head over heels. And that young gelding, he hit another piling with his hip and it threw out his hip, what they called stifled him. If you've ever been around horses, that's what they call it.

  
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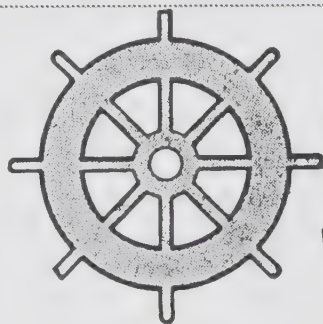


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Report to Congress — March 31, 1997.

Following is one report to Congress between the national Service and Pacific states Marine Fisheries Commission on behalf of the states of Washington, Oregon and California regarding recommendations for addressing the impact of California Sea Lions and Pacific Harbor Seals on Salmonids and West Coast eco-systems:

*Selectively Reinstate Authority for the Intentional Lethal Taking of California Sea Lions — and Pacific Harbor Seals by Commercial Fishermen to Protect gear and Catch*

*Prior to the 1994 Amendments to the MMPA, commercial fishermen were allowed to kill certain pinnipeds as a last resort in order to protect their gear or catch. Although the 1992 NMFS legislative proposal recognized that there was a need for this, such authority was not included in the 1994 Amendments to the MMPA; it was replaced with authority to use deterrence measures that do not kill or seriously injure marine mammals. This non-lethal authority has proven to be of little use because no effective long-term deterrence methods are known. Conflicts between fishermen and pinnipeds have become more frequent, and the economic losses due to pinnipeds have increased. This has also placed increased pressure on federal and state resource agencies to take action to resolve the problems.*

*Some commercial fishermen should still be allowed to use lethal means to protect their gear and catch from depredation by California sea lions and Pacific harbor seals until such time that effective non-lethal methods are developed for their specific situation. These authorizations should be based on a demonstrated need, and be limited to specified areas and fisheries. Fishermen who receive such authorizations should be trained, or demonstrate the ability, to distinguish among California sea lions, Pacific harbor seals, and other pinniped species that may be in the area, to prevent accidental takes of other pinniped species. From a biological perspective, the limited return of lethal deterrence should not be a problem for either California sea lion or Pacific harbor seal populations. The lethal removals that were authorized prior to 1994 did not prevent either population from increasing at five to eight percent per year. Similarly, a limited restoration of this authority is not expected to adversely affect the continued growth of either population, since it will affect only those individuals that have learned to target commercial fishing operations as an easy source of food. Requirements to report such takes would still be in place, and existing PBR limits would restrict all removals to biologically "safe" levels.*

*Although there is sufficient information to warrant action to remove pinnipeds from areas where they co-exist with and prey on salmonid populations of concern, there is an array of additional information needed to evaluate and monitor California sea lion and Pacific harbor seal impacts on salmonids and other components of the West Coast ecosystems.*

*A copy of the scientific investigation report may be obtained by calling Joe Scordino of at 206-526-6143.*



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## Salmon Passage Notes

NW Division US Army Corps of Engineers April 1997  
by Sarah Thomas, freelance writer from Portland

### Managing Spill and

#### Gas Supersaturation at Dams in 1997

One of the biggest concerns this year is the potential for high levels of gas supersaturation in the river from high flows. Flows may reach 250,000 to 345,000 cubic feet per second (cfs) in the lower Snake River and over 500,000 cfs in the lower Snake River and over 500,000 cfs in the lower Columbia River. That means flows will exceed the turbine capacities of the dams and large amounts of water will go over the dam spillways.

While spill is a good way to divert the juvenile fish away from turbines, too much spill can increase total dissolved gas in the river above what are considered safe levels for fish. Water that is spilled plunges deep into the stilling basins on the downstream face of the dams, entraining air and gases. These can enter the vascular systems of fish that pass through or inhabit the water, causing injury or death. Dissolved gas levels this spring are expected to exceed 130 and even 140 percent, well above the 120 percent maximum requested by NMFS and approved in the state water quality waivers.

Again this year the Corps, Bureau of Reclamation, BPA and other utilities will work together to manage spill. A spill priority list will provide guidance on distribution of spill throughout the dams within and outside the Columbia Basin to minimize overall gas supersaturation in the river system. BPA strategies include discounting prices, sales of power outside the region, and arranging to displace other resources with hydroelectric power. Turbines cannot be run without an energy load, that is, a demand for the energy produced. These actions will increase the amount of water that can be sent through the turbines, lessening the need to spill. BPA also plans to shut down the Washington Nuclear Plant #2 and transfer demand to the hydro facilities until dissolved gas levels are within state standards.

To maximize flexibility to put water through the turbines, the Corps makes every effort to have turbine units up and running during high flow periods. Extended maintenance outages are scheduled to best fit fish and power needs; outages during these times are scheduled only where un-

avoidable, such as for equipment failure or as part of a major rehabilitation of a dam.

Unit 5 at Ice Harbor Dam on the lower Snake River has been out of service for several years due to equipment failure. One of six power units at the dam, unit 5 failed again in May 1996 during testing prior to return to service. While the Corps is working to return this unit to service as soon as possible, it will be out during the 1997 fish migration, decreasing capacity to put water through turbines from 96,000 cfs to about 82,000 cfs at Ice Harbor.

Even if all the turbines at the dams are running, there will be high levels of spill when flows exceed the capacity of the powerhouses. For example, at John Day Dam with all turbines running, 320,000 cfs of water can pass through the powerhouse. Another 55,000 cfs can be passed over the spillway without exceeding the state standards for total dissolved gas. But with peak flows of 500,000 cfs expected this year in the lower Columbia River, efforts to manage spill may not be able to make a significant difference in gas levels at the dam.

Another way to help control gas supersaturation is to alter the dam stilling basins. Spillway flow deflectors, or "flip lips," can be installed in the stilling basin to direct the falling water in a more horizontal flow, and decrease supersaturation. Lower Granite, Little Goose, and Lower Monumental dams on the lower Snake River, and Bonneville and McNary dams on the Columbia have flow deflectors in place.

However, very high flows as expected this year may overwhelm the flow deflectors' ability to affect gas supersaturation levels.

#### *Effects on Returning Adult Fish*

As the juvenile fish are making their way downstream, the adult salmon that have been maturing in the ocean for two to five years are beginning to make their way back up to the spawning grounds. At just about any time of the year, there will be some adult anadromous fish migrating upriver. With the high flows expected this spring, there may be some delays for the adults.

Effects on adult fish migration will be most noticeable at the dams, where high flows and spill can interfere with the adult attraction flows that are created at the fish ladder entrances, causing delays in passage.



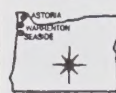
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## Stolen Crab Pots

The Skipper and three deck hands on the 76 foot alaskan boat *The Terrier* were questioned at the coast guard station in Westport, WA and released. 120 crab pots were seized each with a value of \$120.

How it happens: a boat pulls up to a crab pot and retrieves it, the buoy is cut off, identifying marks are removed and the crab pot is returned to the water.

The *Terrier* is owned by Sun Down Corp. of Sitka, Alaska. The ship's captain and 2 deck hands have returned to Alaska. So far, 20 fishermen have identified their gear.

Another boat may have been involved but has not been named. The investigation is continuing. Area crab fishermen have put up a \$10,000 reward for information leading to arrest and conviction.

## STURGEON TAGGING

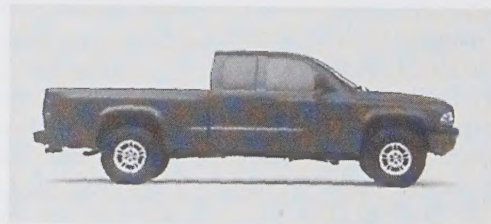
The Oregon Department of Fish and Wildlife will tag several hundred sturgeon in Tillamook Bay by the end of February to track their migration. Sturgeon are anadromous fish, which means they can live in fresh and saltwater. Most sturgeon on the Northwest coast are believed to be Columbia River sturgeon, because the Columbia is the largest body of water with the swift spring streamflows spawning sturgeon prefer. However, Columbia sturgeon in the past have been caught from Grays Harbor to the Rogue River and biologists want to either prove they move freely in and out of other estuaries or that spawning populations have established themselves in other river systems. Tags will be attached to the dorsal area of the fish and will be either yellow "spaghetti" style strings or stainless steel wires with plastic loops. Each will have an address and number. If you catch a tagged sturgeon: record the date and location of the catch, size of the fish and whether it was kept or released. Report the information to the address on the tag. You will be sent a letter explaining the history of that fish. Sturgeon are tough, hardy fish that take handling better than salmon or steelhead, but it is advisable to keep the fish in the water while the information is taken.

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and what return have we meted out to him? He has been hunted pitilessly with hooks and spears, with all kinds of nets and pounds, with wheels and guns and dynamite, and there is not a cubic foot

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*US Fish Commission agent for the Northwest, from Transactions of the American Fisheries Society*



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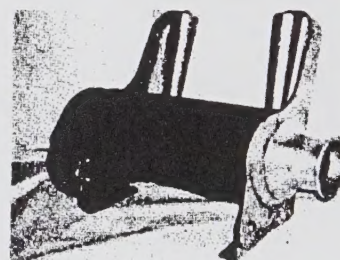
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